Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (presently amended) A digital imaging system comprising:

a photo detector, wherein dark current is outputable from said photo detector;

an analog-to-digital converter to convert the dark current output from the photo detector to at least one electric signal; and

a processor that measures the electric signal representative of the dark current and ~~controls~~ calculates the temperature of the photo detector, based on the dark current measurement.

2. (presently amended) The digital imaging system of claim 1, wherein ~~where~~ the photo detector is a CCD.

3. (presently amended) The digital imaging system of claim 1, wherein ~~where~~ the photo detector is a CMOS detector.

4. (presently amended) The digital imaging system of claim 1, wherein ~~where~~ the control of the temperature is done by altering the performance of at least one heat generating component of the digital imaging system.

5. (presently amended) A method for thermal control of a digital imaging system comprising ~~the steps of~~:

measuring the dark current of a photo detector; and

calculating ~~controlling~~ the temperature of the digital imaging system based on the measured dark current.

6. (presently amended) The method in claim 11, wherein ~~5 where~~ the control of the temperature is done by altering the performance of at least one heat generating component of the digital imaging system.

7. (presently amended) The method of claim 5, wherein the ~~where~~ photo detector is a CCD.

8. (presently amended) The method of claim 5 further comprising ~~the steps of:~~ converting the dark current measurement into temperature information.

9. (presently amended) The method of Claim 5 further comprising ~~the steps of:~~ measuring the dark current of the photo-sensor at a known temperature and storing the measured dark current for later use.

10. (new) The digital imaging system of claim 1, wherein said processor further controls the temperature of at least one component of said digital imaging system based on said temperature.

11. (New) The method of claim 5, and further comprising controlling the temperature of at least one component in said digital imaging system based on the calculated temperature.

12. (new) A method of operating a digital imaging device, said method comprising:

measuring a first dark current of at least one photo detector associated with said digital imaging device;

calculating the temperature of said at least one photo detector based on said first dark current; and

altering the performance of at least one device associated with said digital imaging device based on said temperature.

13. (new) The method of claim 12 and further comprising a first photo detector of said at least one photo detector that is situated within said digital imaging device so as not to receive light, and wherein said measuring comprises measuring a first dark current of said first photo detector.

14. (new) The method of claim 12, wherein said digital imaging device comprises a shutter, wherein said shutter controls the light received by said at least one photo detector, and wherein said measuring comprises closing said shutter and measuring a first dark current of said at least one photo detector.

15. (new) The method of claim 12 and further comprising measuring a second dark current when said at least one photo detector is at a preselected temperature; storing said second dark; and wherein said calculating comprises calculating the temperature of said at least one photo detector based on said first dark current and said second dark current.

16. (new) The method of claim 15, wherein said first dark current changes a preselected amount for a preselected change in temperature, and wherein said calculating comprises calculating the temperature of said at least one photo detector by measuring the difference between said first current and said second current, wherein said temperature of said at least one photo detector is proportional to said difference.